

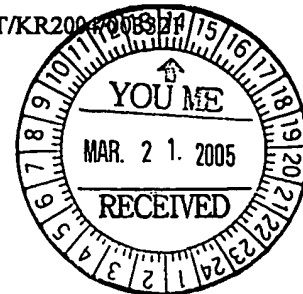
PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

Rec'd PCT/PTO

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PCT



To:

YOU ME PATENT & LAW FIRM

Seolim Bldg. 649-10 Yoksam-dong, Kangnam-ku Seoul 135-080 Republic of Korea

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) 19 MARCH 2005 (19.03.2005)

Applicant's or agent's file reference
OPP043068KR

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/KR2004/003321

International filing date (day/month/year)

16 DECEMBER 2004 (16.12.2004)

Priority date (day/month/year)

19 DECEMBER 2003 (19.12.2003)

International Patent Classification (IPC) or both national classification and IPC

IPC7 G03G 9/08

Applicant

LG CHEM, LTD. et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR



Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

KIM, Hee Seung

Telephone No. 82-42-481-8157



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/04/003321

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
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International application No.

PC 2004/003321

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-15	YES
	Claims		NO
Inventive step (IS)	Claims	1-15	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO

2. Citations and explanations :

Reference is made to the following documents:

D1: US 6,203,955 B1

D2: KR 10-2002-34064 A

I - Novelty and Inventive step

The present invention relates to a non-magnetic mono-component toner composition and a preparation method thereof comprising a toner mother particle comprising a binder resin, a colorant and a charge control agent; a spherical organic fine particle having a weight-average molecular weight of 250,000-1,600,000 and an average particle size of 50-500nm; a hydrophobic silica; and a metal oxide fine particle.

D1 and D2, which are considered to represent the most relevant of the art, disclose a toner composition and a preparation method thereof. D1 discloses a developing agent containing a binder resin, a magnetic particle, titanium oxide, silica treated to have hydrophobicity and a colorant. D2 discloses a non-magnetic mono-component toner composition comprising a binder resin, a colorant, a charge control agent, a hydrophobic silica and a metal oxide fine particle.

Compared with the present invention, none of the above-mentioned prior art documents disclose a spherical organic fine particle to prevent melting or solid adhesion of the toner on the charging blade by reduced frictional resistance applied to the toner during charging between the sleeve and the charging blade. Moreover, it does not appear obvious for the skilled person in the art from D1 and D2 to arrive at the present invention.

Thus, the subject matter of the present claims 1-15 is considered to be novel and to involve an inventive step under PCT Article 33(2) and (3).

II - Industrial Applicability

There is no reason for forming a negative opinion about the industrial applicability of this invention. Consequently, claims 1-15 appear to meet the requirement of PCT Article 33(4).

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of :